

General Information		Chemical Analysis		Physical Properties		Thermal Analysis		Mechanical Properties		Electrical Properties		Optical Properties		Biological Properties	
Parameter	Value	Parameter	Value	Parameter	Value	Parameter	Value	Parameter	Value	Parameter	Value	Parameter	Value	Parameter	Value
Sample ID	12345	Elemental Analysis	C: 65.0%, H: 8.0%, N: 12.0%	Melting Point	150°C	TGA (5% loss)	300°C	Tensile Strength	50 MPa	Resistivity	10 <sup>12</sup> Ω·cm	Refractive Index	1.50	Biocompatibility	ISO 10993-5
Batch No.	ABC-123	FTIR (cm <sup>-1</sup> )	1710, 1600, 1500, 1200, 1100, 1000, 800	Crystallography	Amorphous	DSC (T <sub>g</sub> )	180°C	Elongation at Break	5%	Capacitance	100 pF	Transmittance (%)	80	Cytotoxicity	Low
Manufacturer	XYZ Corp.	NMR (ppm)	7.2, 6.8, 6.5, 5.5, 5.2, 4.8, 4.5, 4.2, 4.0, 3.8, 3.5, 3.2, 3.0, 2.8, 2.5, 2.2, 2.0, 1.8, 1.5, 1.2, 1.0, 0.8, 0.5, 0.2	Hardness	50 Shore D	Thermal Stability	200°C	Modulus	2.0 GPa	Dielectric Loss	0.01	Absorbance (nm)	250-350	Inflammation	Low
Storage Conditions	Room Temp	XRD (2θ)	None	Impact Strength	10 kJ/m <sup>2</sup>	UV Stability	1000 h	Volume Change	0.5%	Thermal Conductivity	0.5 W/m·K	Fluorescence (nm)	350-450	Genotoxicity	Low
Test Method	ASTM D1708	SEM (μm)	0.5	Compression Modulus	1.5 GPa	Weathering	1000 h	Creep	0.1%	Acoustic Impedance	1.5 MRayls	Photoluminescence	None	Mutagenicity	Low
Approval	CE, RoHS	EDS (wt%)	C: 65.0%, H: 8.0%, N: 12.0%	Shear Modulus	1.0 GPa	Biodegradability	None	Stress Relaxation	10%	Thermal Expansion	10 ppm/K	Scattering (nm)	200-300	Immunogenicity	Low
Revision	1.0	AFM (nm)	1.0	Flexural Modulus	1.8 GPa	Long-term Stability	1000 h	Dynamic Mechanical Analysis	See Table 1	Optical Loss	0.05	Microscopy (nm)	10-100	Antigenicity	Low

A method used to form a semiconductor device comprises providing first and second circuit portions having first and second pad portions respectively. The second circuit portion is electrically isolated from the first circuit portion. The first and second pad portions are then electrically connected, for example with a ball bond or a wire bond, to electrically couple the first and second circuit portions. In various embodiments the semiconductor device will not function until the pad portions are electrically coupled, and in other embodiments the functionality of the device may be selectively controlled by connecting selected pad portions from a plurality of pad portions. Isolating the first and second circuit portions allows electrical operations such as antifuse programming to be carried out without adversely affecting related circuits. Once electrical operations are completed, the isolated circuit portions are electrically coupled to provide a complete circuit. Various inventive embodiments and implementations are described.